

CASE REPORT

BRYOBIA PRAETIOSA (CLOVER MITE) INFESTATION IN A FELINE

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Introduction

Acariasis in the cat is usually the result of an infection with *Otodectes cyanotis*, *Notoedres cati*, *Demodex folliculorum* or *Cheyletiella parasitivorax*. Conceivably similar conditions may be caused by other species of mites if the host is subjected to prolonged contact with a heavily infested area.

Bryobia praetiosa (Tetranychidae), the plant feeding clover mite is generally a pest of agricultural crops. The eggs, which are the means by which the mite overwinters in colder climates, are deposited on branches of trees, shrubs and vines, or on grasses and other plants. Larval forms hatch early in the year and multiplication is rapid during warm weather. The mite thrives in a dry environment, and has been observed entering homes and buildings near its natural habitat, particularly in the fall, at which time it crawls into cracks and crevices; these occurring with increasing frequency. (1,2,3,4,5,7,8,9,10,11,12)

This mite is 0.8 mm. long with four projections from the anterior end of the body, each bearing a fanlike seta (Figures 1 and 2). The legs have true claws (Figures 1 and 4) and the brown body bears short setae (Figures 1 and 3). Two long anterior legs are another distinguishing feature (Figure 1).

History

In June, 1967, a white domestic long-haired cat, 16 years of age, was presented for examination of a slowly progressing (over a three week period) hyperemia of the skin. The client had owned the patient since it was a kitten, and there had been no previous occurrence of a similar condition. The Barberry hedges about the owner's home were said to be one of the cat's favourite haunts.

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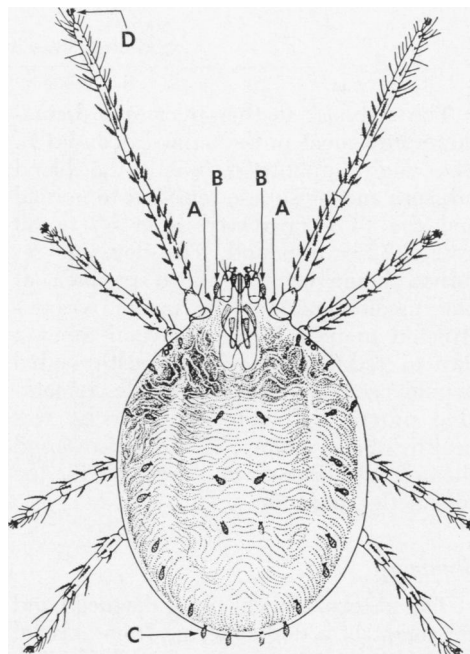


FIGURE 1. Diagram of *Bryobia praetiosa* (courtesy of New York Pest Control Association) showing

- (a) anterior body protuberances,
- (b) fanlike setae at the end of the protuberances,
- (c) fanlike body seta, and
- (d) true claws on legs.

Clinical Findings

Examination revealed hyperemia of the entire skin surface, especially over an area four inches long and two inches wide in the lumbo-sacral region. When the hair coat was rubbed many tiny brownish-red objects were freed. These might have been mistaken for flea droppings but they were moving. Microscopic examination revealed these to be mites, subsequently identified as *Bryobia praetiosa* (6). Slight dehydration, tartar encrusted molars and a small necrotic plaque on the hard palate were also noted. Thorough examination failed to reveal the presence of any other arthropods.

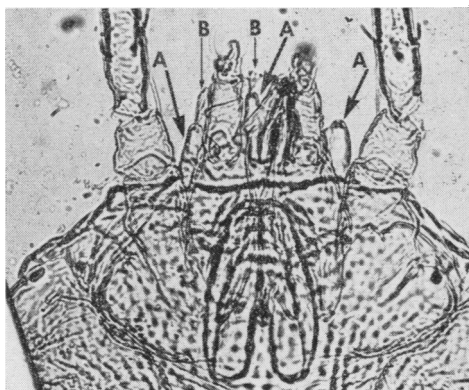


FIGURE 2. Photomicrograph of the anterior end of *B. praetiosa*.

- (a) Anterior body protuberances, and
- (b) fan-like setae.

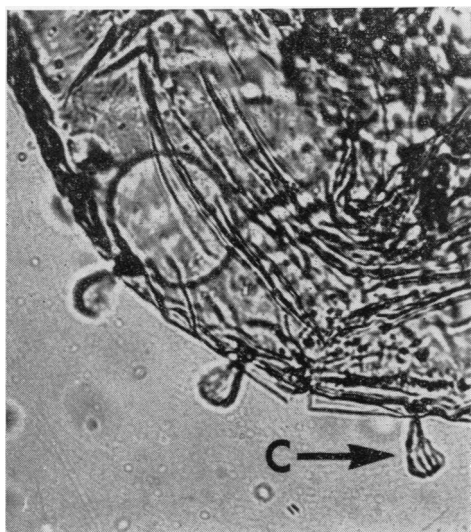


FIGURE 3. Photomicrograph of posterior body showing body seta (C).

Treatment

The animal was bathed using a 0.13% rotenone and 0.65% malathion shampoo¹. Following this, the tartar was removed from the teeth. Procaine penicillin G (5,000 I.U.), benzathine penicillin (5,000 I.U.) and dihydrostreptomycin sulfate² (250 mg.) per pound body weight were administered intramuscularly. Nine-fluoro-

¹Ormond Flea Shampoo, Ormond Veterinary Supplies, Hamilton, Ontario.

²Derapen-C, Ayerst Laboratories, Montreal, Quebec.

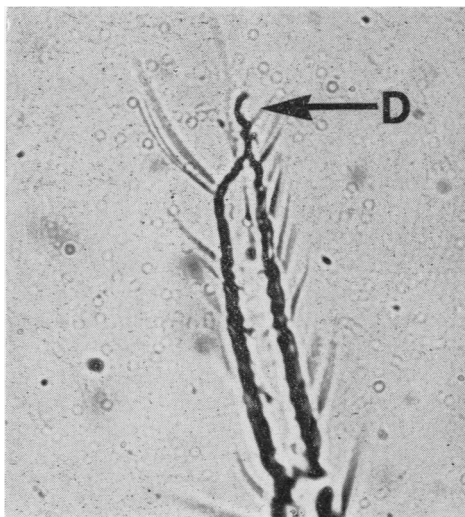


FIGURE 4. Photomicrograph of leg showing true claw (D).

prednisolone acetate³ (0.25 mg.) was also given intramuscularly. The oral lesions were swabbed daily with 2% potassium permanganate (KMnO₄). Inappetance for two days was followed by a gradual return to normal feeding habits. The temperature throughout the treatment period ranged from 100° F. to 101° F. The hyperemia of the skin gradually subsided and the cat was discharged five days after admittance. The weekly application of a flea spray or powder was recommended. Subsequent examination on the eleventh day after treatment began, showed that the skin had returned to normal color. By the twentieth day, most of the hair on the affected area showed good regeneration.

Discussion

A thorough search of the literature failed to show any previous reports on this mite occurring on a feline. The dehydration and anorexia noticed at the beginning of the treatment period were presumed to be due to the dental encrustation with tartar, which caused sufficient pain to inhibit eating.

Because there appeared to be no other cause for the marked hyperemia of the skin and denuding of the hair on this cat, it was considered that it might have been

³Predef-2X, Upjohn Company, Don Mills, Ontario.

caused by the presence of large numbers of the mite *Bryobia praetiosa*. One can only speculate whether the lesions were due to mechanical irritation or actual biting by the mites, or an allergic manifestation to the mites or their secretions, or whether the presence of the mite caused sufficient irritation to result in self-mutilation by the host.

If this mite was the cause of the syndrome described, one may reflect that its increasing occurrence in homes and other buildings (1) may result in further cases of dermatitis in domestic animals, especially household pets, and conceivably even in man.

It has been debated among various parasitologists whether this could be termed a true acariosis.

Summary

An incidence of *Bryobia praetiosa* infestation with accompanying dermatitis lesions is reported. The authors' regimen of therapy is outlined.

Résumé

Les auteurs attribuent une acariase cutanée chez un chat à *Bryobia praetiosa*, et ils rapportent leur traitement dans ce cas.

Acknowledgments

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ABSTRACT

Wilson, G. S. (1967). The hazards of immunization.—pp. 324 London: Athlone Press. 45s.

Sir Graham Wilson presents a fascinating and scholarly discussion of the following topics: simple reactions to bacterial vaccines; faulty production (inherent toxicity or infectivity, foreign toxin present, use of wrong culture, contamination); faulty administration; allergic mani-

festations (eight chapters); general anaphylaxis; abnormal sensitivity of patient; indirect effects (damage to the foetus and provocation of disease). Examples are, of course, drawn from human medicine, but the lessons to be learned apply equally to veterinary medicine.

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